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Serial No. 09/913,501

IN THE CLAIMS:

1. to 76. (Canceled)

77. (New) A polymer battery module packaging sheet for packaging a polymer battery module, comprising, as essential components:

a base layer,

an aluminum layer,

a chemical conversion coating, and

an innermost layer;

wherein (1) the innermost layer includes an adhesive resin layer, and

(2) the chemical conversion coating is formed by phosphate treatment using a mixture of a phenolic resin, trivalent chromium phosphate, and phosphoric acid.

78. (New) A polymer battery module packaging sheet for packaging a polymer battery module, comprising, as essential components:

a base layer,

an aluminum layer,
a chemical conversion coating, and
an innermost layer;

wherein (1) the innermost layer includes an adhesive resin layer, and

(2) the aluminum layer has a thickness in the range of 20 to 80 μm , and an iron content in the range of 0.3 to 9.0% by weight.

79. (New) The polymer battery module packaging sheet according to claim 77, wherein the innermost layer further includes an innermost resin layer.

80. (New) The polymer battery module packaging sheet according to claim 78, wherein the innermost layer further includes an innermost resin layer.

81. (New) The polymer battery module packaging sheet according to claim 79, wherein

the adhesive resin layer is formed of an acid-modified polypropylene resin, the innermost resin layer is formed of a

polypropylene resin, and the adhesive resin layer and the innermost layer are formed by a coextrusion lamination method.

82. (New) The polymer battery module packaging sheet according to claim 79, wherein

the adhesive resin layer is formed of an acid-modified polypropylene resin, the innermost resin layer is a film of a polypropylene resin, and the adhesive resin layer and the innermost resin layer are formed by a sandwich lamination method.

83. (New) The polymer battery module packaging sheet according to claim 79, wherein

the adhesive resin layer contains an acid-modified polypropylene resin, the innermost resin layer contains an ethylene-butene-propylene terpolymer, and the adhesive resin layer and the innermost layer are formed by a coextrusion lamination method.

84. (New) The polymer battery module packaging sheet according to claim 77, wherein an additional chemical conversion

coating is interposed between the base layer and the aluminum layer.

85. (New) The polymer battery module packaging sheet according to claim 78, wherein an additional conversion coating is interposed between the base layer and the aluminum layer.

86. (New) The polymer battery module packaging sheet according to claim 77, wherein the innermost resin layer is formed of an ethylene-rich polypropylene resin.

87. (New) The polymer battery module packaging sheet according to claim 78, wherein the innermost resin layer is formed of an ethylene-rich polypropylene resin.

88. (New) The polymer battery module packaging sheet according to claim 79, wherein

the adhesive resin layer is formed of a material containing an acid-modified polypropylene resin as a principal component, the innermost resin layer includes a layer formed of an ethylene-rich random polypropylene resin having an ethylene

content in the range of 5% to 10% by mol, and the adhesive resin layer and the innermost resin layer are formed by a sandwich lamination method.

89. (New) A polymer battery module packaging sheet manufacturing method comprising the steps of:

processing at least one of a surface of an aluminum layer by chemical conversion treatment;

dry-laminating a base layer to one of the surfaces of the aluminum layer;

forming a laminated sheet by laminating a film consisting of an adhesive resin layer and an innermost layer and formed by a coextrusion lamination method to the surface processed by the chemical conversion treatment of the aluminum layer so that the adhesive resin layer faces the aluminum layer, and then cooling the adhesive resin layer at a temperature not higher than a softening point of the adhesive resin layer by passing the laminated sheet between a chill roll and a pressure roll; and

heating the laminated sheet so that the adhesive resin layer is heated at a temperature not lower than its softening point and not higher than its melting point.

90. (New) A polymer battery module packaging sheet manufacturing method comprising the steps of:

processing at least one of a surface of an aluminum layer by chemical conversion treatment;

dry-laminating a base layer to one of the surfaces of the aluminum layer;

forming a laminated sheet by bonding a polypropylene resin film with an adhesive resin layer of an acid-modified polypropylene resin to the other surface processed by the chemical conversion treatment of the aluminum layer by a sandwich lamination process so that the adhesive resin layer faces the aluminum layer, and then cooling the adhesive resin layer at a temperature not higher than a softening point of the adhesive resin layer by passing the laminated sheet between a chill roll and a pressure roll; and

heating the laminated sheet so that the adhesive resin layer is heated at a temperature not lower than its softening point and not higher than its melting point.

91. (New) A polymer battery module packaging sheet manufacturing method comprising the steps of:

processing at least one of a surface of an aluminum layer by chemical conversion treatment;

dry-laminating a base layer to one of the surfaces of the aluminum layer;

forming a laminated sheet by laminating a film consisting of a film of an adhesive resin layer of an acid-modified polyethylene resin and a film of a polyethylene resin to the surface processed by the chemical conversion treatment of the aluminum layer by a coextrusion lamination method so that the adhesive resin layer faces the aluminum layer, and then cooling the adhesive resin layer at a temperature not higher than a softening point of the adhesive resin layer by passing the laminated sheet between a chill roll and a pressure roll; and

heating the laminated sheet so that the film of the acid-modified polyethylene resin is heated at a temperature not lower than the softening point of the acid-modified polyethylene resin and not higher than its melting point.

92. (New) A polymer battery module packaging sheet manufacturing method comprising the steps of:

processing at least one of a surface of an aluminum layer by chemical conversion treatment;

dry-laminating a base layer to one of the surfaces of the aluminum layer;

forming a laminated sheet by bonding a film of a polyethylene resin with an adhesive resin layer of an acid-modified polyethylene resin to the surface processed by the chemical conversion treatment of the aluminum layer by a sandwich lamination process so that the adhesive resin layer faces the aluminum layer, and then cooling the adhesive resin layer at a temperature not higher than a softening point of the adhesive resin layer by passing the laminated sheet between a chill roll and a pressure roll; and

heating the laminated sheet so that the adhesive resin layer is heated at a temperature not lower than the softening point of the acid-modified polyethylene resin and not higher than its melting point.

93. (New) A polymer battery module packaging sheet manufacturing method comprising the steps of:

processing at least one of a surface of an aluminum layer by chemical conversion treatment;

dry-laminating a base layer to one of the surfaces of the aluminum layer;

forming a laminated sheet by laminating a film consisting of a film of an adhesive resin layer of an acid-modified polypropylene resin and a film of an ethylene-rich random polypropylene resin to the surface processed by the chemical conversion treatment of the aluminum layer by a coextrusion lamination method so that the adhesive resin layer faces the aluminum layer, and then cooling the adhesive resin layer at a temperature not higher than a softening point of the adhesive resin layer by passing the laminated sheet between a chill roll and a pressure roll; and

heating the laminated sheet so that the adhesive resin layer is heated at a temperature not lower than the softening point of the acid-modified polypropylene resin and not higher than its melting point.

94. (New) A polymer battery module packaging sheet manufacturing method comprising the steps of:

processing at least one of a surface of an aluminum layer by chemical conversion treatment;

dry-laminating a base layer to one of the surfaces of the aluminum layer;

forming a laminated sheet by bonding a film of an ethylene-rich random polypropylene resin with an adhesive resin layer of an acid-modified polypropylene resin to the surface processed by the chemical conversion treatment of the aluminum layer by a sandwich lamination process so that the adhesive resin layer faces the aluminum layer, and then cooling the adhesive resin layer at a temperature not higher than a softening point of the adhesive resin layer by passing the laminated sheet between a chill roll and a pressure roll; and

heating the laminated sheet so that the adhesive resin layer is heated at a temperature not lower than the softening point of the resin layer and not higher than its melting point.

95. (New) The polymer battery module packaging sheet manufacturing method according to claim 90, wherein both

surfaces of the aluminum layer are processed by a chemical conversion treatment.

96. (New) The polymer battery module packaging sheet manufacturing method according to claim 91, wherein both surfaces of the aluminum layer are processed by a chemical conversion treatment.

97. (New) The polymer battery module packaging sheet manufacturing method according to claim 95, wherein both the surfaces of the aluminum layer are processed by a chemical conversion treatment, using a mixture of a phenolic resin, trivalent chromium phosphate, and phosphoric acid.

98. (New) the polymer battery module packaging sheet manufacturing method according to claim 93, wherein the polypropylene resin is a multilayer structure including at least one layer of an ethylene-rich random polypropylene resin.

99. (New) The polymer battery module packaging sheet manufacturing method according to claim 94, wherein the

polypropylene resin is a multilayer structure including at least one layer of an ethylene-rich random polypropylene resin.

100. (New) A polymer battery module packaging sheet manufacturing method, comprising the steps of:

processing one of a surface of an aluminum layer by chemical conversion treatment;

dry-laminating the aluminum layer to a base layer with the other surface of the aluminum layer not processed by the chemical conversion treatment bonded to the base layer;

forming an innermost layer on the surface processed by the chemical conversion treatment of the aluminum layer by extruding a molten resin for forming the innermost layer in a molten resin film by an extrusion method, and

heating the innermost layer at a temperature not lower than its softening point and not higher than its melting point.

101. (New) The polymer battery module packaging sheet manufacturing method according to claim 100, wherein a surface of the molten resin film facing the aluminum layer is processed by ozone treatment when forming the innermost layer.

102. (New) The polymer battery module packaging sheet manufacturing method according to claim 90, wherein a surface of the adhesive resin layer facing the aluminum layer is processed by ozone treatment when forming the laminated sheet.

103. (New) A polymer battery module packaging sheet manufacturing method comprising the steps of:

processing at least one of a surface of an aluminum layer by chemical conversion treatment;

dry-laminating a base layer to one of the surfaces of the aluminum layer; and

forming a laminated sheet by heating the surface processed by the chemical conversion treatment of the aluminum layer at a temperature not lower than a softening point of an adhesive resin layer and laminating a film consisting of a film of the adhesive resin layer and a film of an innermost resin layer to the surface processed by the chemical conversion treatment of the aluminum layer by a coextrusion lamination method so that the adhesive resin layer faces the aluminum layer.

104. (New) A polymer battery module packaging sheet manufacturing method comprising the steps of:

processing at least one of a surface of an aluminum layer by chemical conversion treatment;

dry-laminating a base layer to one of the surfaces of the aluminum layer;

forming a laminated sheet by bonding a film of an innermost layer with an adhesive resin layer to the surface processed by the chemical conversion treatment of the aluminum layer by a sandwich lamination process so that the adhesive layer faces the aluminum layer, while heating the surface processed by the chemical conversion treatment of the aluminum layer at a temperature not lower than a softening point of the adhesive resin layer.

105. (New) The polymer battery module packaging sheet manufacturing method according to claim 103, wherein both surfaces of the aluminum layer are processed by a chemical conversion treatment.

106. (New) The polymer battery module packaging sheet manufacturing method according to claim 104, wherein both surfaces of the aluminum layer are processed by a chemical conversion treatment.

107. (New) The polymer battery module packaging sheet manufacturing method according to claim 103, wherein the polypropylene resin is a multilayer structure including at least one layer of an ethylene-rich random polypropylene resin.

108. (New) The polymer battery module packaging sheet manufacturing method according to claim 104, wherein the polypropylene resin is a multilayer structure including at least one layer of an ethylene-rich random polypropylene resin.

109. (New) The polymer battery module packing sheet manufacturing method according to claim 103, wherein a surface of the adhesive resin layer facing the aluminum layer is processed by ozone treatment when forming the laminated sheet.

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110. (New) The polymer battery module packing sheet manufacturing method according to claim 104, wherein a surface of the adhesive resin layer facing the aluminum layer is processed by ozone treatment when forming the laminated sheet.